

AMENDMENTS TO THE CLAIMS:

Claims 1-24 were pending at the time of the Final Office Action.

Claims 1, 6, 7, 9, 10, 16, 18, and 22 are amended. Claims 1-24 remain pending.

1. (Currently Amended) A device for switching between a plurality of video inputs and a plurality of video outputs, the device comprising:

an interface device coupled to a data bus; and

a switch coupled to the interface device and a plurality of video inputs and outputs, the switch including a control logic component operatively coupled to a video crosspoint switch that is, in turn, coupled to the plurality of video inputs and the plurality of video outputs; and

wherein when a video switching signal is received by the interface device over the data bus, the interface device transmits the video switching signal to the control logic component, the control logic component being configured to interpret the video switching signal, to generate a video switch instruction based on the received video switching signal, and to send the generated video switch instruction to the video crosspoint switch, the video crosspoint switch being configured to connect one or more of the video inputs to one or more of the video outputs according to the video switch instruction, and

wherein the control logic component includes

a local bus control logic component configured to receive and interpret control signals from the interface device;

a command word buffer coupled to the local bus control logic component and configured to receive and buffer command words from the interface device, and local commands from the local bus control logic component; and

a switch control state machine coupled to the command word buffer and configured to receive command words from the command word buffer and to

condition the command words into an output signal suitable for input to the video crosspoint switch.

2. (Original) The device of Claim 1, wherein the switch is coupled to one or more helmet display devices.

3. (Original) The device of Claim 1, wherein at least a portion of the switch is constructed according to a PMC formfactor.

4. (Original) The device of Claim 3, wherein the device is implemented on a single circuit board.

5. (Original) The device of Claim 4, wherein the interface device is adaptable to connect to a PCI data bus.

6. (Currently Amended) The device of Claim 5 1, wherein the circuit board is coupled to the PCI data bus within a video box ~~the control logic component includes~~

~~a local bus control logic component configured to receive and interpret control signals from the interface device;~~

~~a command word buffer coupled to the local bus control logic component and configured to receive and buffer command words from the interface device, and local commands from the local bus control logic component; and~~

~~a switch control state machine coupled to the command word buffer and configured to receive command words from the command word buffer and to condition the command words into an output signal suitable for input to the video crosspoint switch .~~

7. (Currently Amended) A method for switching between a plurality of video inputs and a plurality of video outputs, the method comprising:

receiving a video switching signal at an interface device of a switch device;
generating a video instruction at the interface device based on the received video switching signal;

sending the generated video instruction to a switch, the switch including a control logic component operatively coupled to a video crosspoint switch that is, in turn, coupled to the plurality of video inputs and the plurality of video outputs, the control logic component receiving and interpreting the video instruction and outputting a video switch instruction to the video crosspoint switch based on the received video instruction; and

connecting one or more of the video inputs to one or more of the video outputs according to the video switch instruction using the video crosspoint switch,

wherein sending the generated video instruction to a switch including a control logic component includes sending the generated video instruction to a switch including a control logic component having:

a local bus control logic component configured to receive and interpret control signals from the interface device;

a command word buffer coupled to the local bus control logic component and configured to receive and buffer command words from the interface device, and local commands from the local bus control logic component;
and

a switch control state machine coupled to the command word buffer and configured to receive command words from the command word buffer and to condition the command words into an output signal suitable for input to the video crosspoint switch.

8. (Original) The method of Claim 7, wherein the video outputs include one or more helmet display devices.

9. (Currently Amended) The method of Claim 7, wherein receiving the video switching signal includes receiving the video switching signal from a PCI data bus ~~sending the generated video instruction to a switch including a control logic component includes sending the generated video instruction to a switch including a control logic component having:~~

~~a local bus control logic component configured to receive and interpret control signals from the interface device;~~
~~a command word buffer coupled to the local bus control logic component and configured to receive and buffer command words from the interface device, and local commands from the local bus control logic component; and~~
~~a switch control state machine coupled to the command word buffer and configured to receive command words from the command word buffer and to condition the command words into an output signal suitable for input to the video crosspoint switch .~~

10. (Currently Amended) A video system comprising:

a video box comprising:

a video controller; and
a video switch including a control logic component operatively coupled to a video crosspoint switch;
one or more user interfaces coupled to the video controller;
a plurality of video inputs coupled to the video crosspoint switch; and
a plurality of video outputs coupled to the video crosspoint switch,
wherein activation of the user interface generates a video control signal and sends the generated video control signal to the video controller, the video controller generates a video switching signal based on the received video control signal and

transmits the video switching signal to the control logic component, the control logic component being configured to interpret the video switching signal, to send a video switch instruction to the video crosspoint switch, and the video crosspoint switch being configured to connect one or more of the plurality of video inputs to one or more of the plurality of video outputs based on the generated video switch instruction, and

wherein the control logic component includes

a local bus control logic component configured to receive and interpret control signals from the interface device;

a command word buffer coupled to the local bus control logic component and configured to receive and buffer command words from the interface device, and local commands from the local bus control logic component; and

a switch control state machine coupled to the command word buffer and configured to receive command words from the command word buffer and to condition the command words into an output signal suitable for input to the video crosspoint switch.

11. (Original) The system of Claim 10, wherein the plurality of video inputs include 16 video inputs and the plurality of video outputs include 16 video outputs.

12. (Original) The system of Claim 10, wherein one or more of the plurality of video outputs include a helmet display device.

13. (Original) The system of Claim 10, wherein the video box includes a data bus for delivering the video switching signal.

14. (Original) The system of Claim 13, wherein the data bus is a PCI bus.

15. (Original) The system of Claim 14, wherein the video switch is coupled to the PCI bus.

16. (Currently Amended) The system of Claim 15 10, wherein the video switch is implemented on a single circuit board according to a PMC formfactor ~~the control logic component includes~~

~~a local bus control logic component configured to receive and interpret control signals from the interface device;~~
~~a command word buffer coupled to the local bus control logic component and configured to receive and buffer command words from the interface device, and local commands from the local bus control logic component; and~~
~~a switch control state machine coupled to the command word buffer and configured to receive command words from the command word buffer and to condition the command words into an output signal suitable for input to the video crosspoint switch.~~

17. (Original) The system of Claim 13, wherein the video switch includes:

an interface device coupled to the data bus; and
a switch coupled to the interface device and the plurality of video inputs and outputs, wherein the video switching signal is received by the interface device over the data bus, the interface device generates a video switch instruction based on the received video switching signal and sends the generated video switch instruction to the switch, and the switch connects one or more of the video inputs to one or more of the video outputs according to the video switch instruction.

18. (Currently Amended) A method comprising:

generating a video control signal at a user interface;

sending the generated video control signal to a video controller;

generating a video switching signal based on the received video control signal the video controller;

sending the generated video switching signal to a video switch, the video switch including a control logic component operatively coupled to a video crosspoint switch that is, in turn, coupled to the plurality of video inputs and the plurality of video outputs, the control logic component receiving and interpreting the video instruction and outputting a video switch instruction to the video crosspoint switch based on the received video instruction; and

connecting one or more of a plurality of video inputs to one or more of a plurality of video outputs at the video switch based on the generated video switching signal using the video crosspoint switch,

wherein sending the generated video instruction to a switch including a control logic component includes sending the generated video instruction to a switch including a control logic component having:

a local bus control logic component configured to receive and interpret control signals from the interface device;

a command word buffer coupled to the local bus control logic component and configured to receive and buffer command words from the interface device, and local commands from the local bus control logic component;
and

a switch control state machine coupled to the command word buffer and configured to receive command words from the command word buffer and to condition the command words into an output signal suitable for input to the video crosspoint switch.

19. (Original) The method of Claim 18, wherein the plurality of video inputs includes 16 video inputs and the plurality of video outputs include 16 video outputs.

20. (Original) The method of Claim 18, wherein connecting includes connecting to one or more helmet display devices.

21. (Original) The method of Claim 18, wherein sending the generated video switching signal to a video switch includes sending the generated video switching signal over a data bus.

22. (Currently Amended) The method of Claim ~~21~~ 18, wherein the data bus is a PCI bus ~~sending the generated video instruction to a switch including a control logic component includes sending the generated video instruction to a switch including a control logic component having:~~

~~a local bus control logic component configured to receive and interpret control signals from the interface device;~~
~~a command word buffer coupled to the local bus control logic component and configured to receive and buffer command words from the interface device, and local commands from the local bus control logic component; and~~
~~a switch control state machine coupled to the command word buffer and configured to receive command words from the command word buffer and to condition the command words into an output signal suitable for input to the video crosspoint switch.~~

23. (Original) The method of Claim 22, further comprising implementing the video switch on a single circuit board according to a PMC formfactor.

24. (Original) The method of Claim 18, wherein connecting one or more of a plurality of video inputs to one or more of a plurality of video outputs at the video switch based on the generated video switching signal includes:

- receiving the video switching signal at an interface device of a switch device;
- generating a video switch instruction at the interface device based on the received video switching signal;
- sending the generated video switch instruction to the switch device; and
- connecting one or more of the video inputs to one or more of the video outputs at the switch device according to the video switch instruction.